NEW APPLICATION

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BEFORE THE ARIZONA CORPORATION COMMISSION

JAMES M. IRVIN
Chairman
RENZ D. JENNINGS
Commissioner
CARL J. KUNASEK
Commissioner

DOCKET NO. E-01461A-98-0526 Phase-In Prog.

DOCKET NO. E-01461A-98-0527 Systems Benefits

IN THE MATTER OF THE COMPETITION IN THE PROVISION OF ELECTRIC SERVICES THROUGHOUT THE STATE OF ARIZONA

~~Docket No. RE 00000C-94-0165~~

RESIDENTIAL PHASE-IN PROGRAM PROPOSAL AND PROPOSALS TO BENEFIT STANDARD OFFER CUSTOMERS BY TRICO ELECTRIC COOPERATIVE, INC.

Trico Electric Cooperative, Inc., ("Trico") hereby submits its Residential Phase-In Program Proposal for the phasing in of residential customers into electric generation competition pursuant to R14-2-1604(B)(4) of the Retail Electric Competition Rules, A.A.C. Title 14, Chapter 2, Article 16 ("Rules") and its Proposal of Benefits to Standard Offer Customers pursuant to R14-2-1604(C).

Arizona Corporation Commission
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RESIDENTIAL PHASE-IN PROGRAM

This Program is based on Trico's understanding of the requirements of R14-2-1604(B) and the following data and assumptions:

A. Trico's 1995 system peak demand was 58,923 kilowatts ("KW").

B. Trico will make at least 20% or 11,790 KW available for electric generation competition during the Phase-In period , January 1, 1999 through December 31, 2000.

C. Trico projects that on January 1, 1999, it will have 21,000 residential customers. Therefore, its initial quarterly commitment through March 31, 1999, is 105 customers. Each quarter, Trico will recompute the number of eligible customers based upon the most recent residential customer count.

Trico's Proposed Program consists of the following specific actions:

I. Process for Customer Notification of Residential Phase-In Program.

Trico sends to each of its customers a monthly publication of the *Livewire*, which is Trico's official publication. The *Livewire* includes information to customers regarding their cooperative, expressly including the development of retail competition, and official notices. Trico will utilize the *Livewire* to notify customers of the availability of the Residential Phase-In Program. This direct written notification may be supplemented by information pamphlets that will be developed through a cooperative effort with other Arizona utilities.

II. Selection and Tracking Mechanism for Customers on First-Come First-Served Basis.

All residential customers of Trico will be notified that selection will be on a first-come first-served selective method. The written notice shall expressly state that the application form for electric generation competition and other electric competition services will be available together with a release of information form, at Trico's office commencing at 8:00 a.m., Monday, December 7, 1998 and that the eligibility for such competition will be based upon the time the written application and release information form are delivered to, or received, by Trico's designated personnel. The application will contain all the necessary information required by the Rules for retail electric competition service, a release of information authorization concerning the customer's previous account with Trico and an authorization by the customer to be contacted by Electric Service Providers ("ESP's") as defined in the Rules. Trico will date stamp with the time of day, each application it receives. The application packet will contain information regarding terms and conditions of the services that Trico will provide customers electing to participate in the Phase-In Program, including a schedule of fees for changing service or transfers between ESPs in accordance with R14-2-203(D)(1). Trico will prepare a list of residential customers from whom it receives such applications in chronological order to comply with the first-come first-served method. When Trico's commitment for the first quarter is fulfilled, a waiting list will be established to begin a priority list for the next quarter. Each subsequent quarter of the Phase-In period will be handled in the same manner. The list will be available to ESPs upon request and payment of the fee as permitted by the Rules for such information.

III. Customer Notification Process and Other Education Information Services to Be Offered.

The eligible residential customers will be notified of their selection as soon as their qualifications are verified. Eligible residential customers may elect to change ESPs anytime in the manner provided by the applicable rules of the Arizona Corporation Commission and applicable contracts between Trico and the selected ESP. Until an eligible residential customer receives electric service from an ESP, the customer will continue to receive service under Trico's Standard Offer tariff. Should an eligible residential customer fail to receive service from an ESP during the quarter for which the customer has first become eligible to receive competitive service, the customer must then re-apply for electric competitive service and such re-application shall be placed on the list as of the date and time received by Trico. Customers on a waiting list will be so notified and will be contacted when they become eligible. Trico will utilize the *Livewire* to provide informational and educational materials and will supplement this information with additional information, such as material developed and provided by the Commission.

IV. Load Profiling Methodology and Load Profiles.

Trico has been an active participant in several working groups whose objectives are to develop load profiling methodologies. Attached is a copy of a draft methodology that has been developed by Trico and other Class A Members of Arizona Electric Power Cooperative, Inc. ("AEPCO"). Until additional load profile data has been generated in accordance with the described program, Trico will utilize data from a load research project undertaken in 1992-1994 by AEPCO and its Class A Members, data made available by other Arizona electric utilities, and suitable data from the public domain.

V. Method for Calculating Reserved Load.

Although the term "Reserved Load" is not a defined term in the Rules, Trico assumes that in the context of R14-2-1604, the term is used to describe the portion of the load that Trico makes available for competition in accordance with R14-2-1604(A), will be reserved for residential users. Based upon Trico's expected residential customer count, as of January 1, 1999, Trico will have 105 residential customers available for competitive electric generation service. Over the Phase-In, the total number of residential customers eligible for competition will rise to approximately 930 based on 4% of current customer count plus allowance for growth. Load research performed by AEPCO and Trico indicates that the average residential customer contributes approximately 2 KW to the Trico system peak. Therefore, Trico will reserve a minimum 1,960 KW of its total load eligible for competition for residential customers.

Trico reserves the right to modify the above plan as the Rules are implemented and will file amendments to this plan as appropriate and as approved by the Trico Board of Directors, subject to the approval of the Director, Utilities Division.

BENEFITS TO STANDARD OFFER CUSTOMERS

Trico is a nonprofit, distribution cooperative that provides service to approximately 21,000 customers in portions of Pima, Pinal and Santa Cruz Counties, Arizona. Because Trico is a cooperative, its customers are its owners. Trico owns no generation facilities and purchases all of its requirements for electricity from AEPCO. AEPCO is a nonprofit generation and transmission cooperative with Class A, B and C Members. Each Class A Member is represented on AEPCO's Board by two directors and the Class B Members, collectively, and the Class C Members, collectively, are each represented by one director. Members have served as load

aggregators on behalf of the member/consumers of the distribution cooperatives. The distribution cooperatives aggregate the end-users load's and AEPCO aggregates the loads of the distribution cooperatives. AEPCO is formed by the distribution cooperatives to obtain a reliable supply of electricity on a cost effective basis.

Specific Programs.

The advent of competitions has caused the entire utility industry to examine the way each utility conducts business and seeks opportunities to reduce the cost of electricity delivered to customers. Trico continuously reviews its operations and examines cost savings opportunities. As a member/consumer owned entity, Trico's goal is to provide the lowest cost electricity delivered to its customers that is reasonably practicable and will enable Trico to be financially sound.

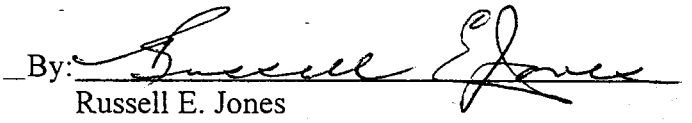
One of the most significant benefits that Trico provides to its customers, and Standard Offer customers will continue to receive the benefits, is through Trico's credit rotation policy. For several years, Trico has retired credits on a 15 year cycle based on the First In – First Out method. In addition, because Trico margins have exceeded budget over the last four years and because the financial condition of Trico permitted it to do so, Trico has made refunds on a Last In – First Out method. Trico for 1996 and 1997, retired capital credits each of those years on a Last In – First Out method that in effect, has reduced the rates paid by Trico's residential customers by approximately 4% per year.

Another benefit that Trico's Standard Offer customers will receive, is the positive efforts that Trico has made in conjunction with AEPCO in lowering the cost of the supply of electricity. The cost of electric supply is more than 60% of Trico's cost of providing electric service.

Working with AEPCO, Trico has developed several demand side management programs and rate alternatives, such as interruptible service rates, that Trico will continue to offer its Standard Offer customers. Trico's wholesale electricity costs have declined as AEPCO has effectively undertaken cost savings measures in a time period when certain other utilities' electricity costs have not done so. The Trico Board of Directors, its management, its staff and its representatives on the AEPCO Board of Directors, are currently working on an innovative plan for restructuring AEPCO to better enable AEPCO to compete in the evolving energy market place. Trico's members and Standard Offer customers will see the benefits of that activity in the long run.

Trico has provided non-electric related services to its customers and it will continue to vigorously attempt to improve the economic life of its customers through innovative programs.

O'CONNOR CAVANAGH MOLLOY JONES

By: 
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Original and ten (10) copies of the foregoing filed this 15th day of September, 1998, with:

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INTRODUCTION TO THE LOAD PROFILING SOLUTION

On January 1, 1999, retail marketers of electricity in Arizona will be required to schedule loads on an hour-ahead or day-ahead basis through their scheduling coordinators who, in turn, will notify control area operators with Independent System Administrator (ISA) oversight. The load settlement process of electric retail access will require as an input, customer load data on an hourly (or other short interval) basis. Due to the relative high cost of interval metering for residential customers (and small commercial direct access participants in the future), any market participation by these (less than 20 kW) customers will require some other means of estimating the time distribution of their loads.

Load profiling, a statistical sampling technique for estimating standard customer usage patterns which can be balanced to actual meter readings and used as proxies for actual load shapes, offers one solution. Data from direct access customers will be aggregated on an hour-by-hour basis for scheduling and settlement, even though the actual end-use customer may still be billed on a traditional demand and/or energy tariff. This aggregated hourly data will be submitted to the control area operators and ISA organizations by the Energy Service Provider (ESP) who will obtain it from the Local Distribution Cooperatives (LDCs). It should be noted that the scheduled loads will be balanced against the actual consumption of direct access customers with the potential for financial penalties for any imbalances between these loads.

The Arizona Corporation Commission (ACC) Unbundled Services Working Group, Load Profiling Subgroup (USWGLPS) proposes the development and implementation of a statewide Load Profiling system to enable the participation of residential and small commercial customers in the competitive market for electricity. The USWGLPS recommends that the load profiling system used in Arizona should incorporate the following: (1) development and utilization of a set of load profile segments applicable to meet the needs of all affected entities, e.g., ESPs, Utility Distribution Companies (UDCs) and LDCs; (2) be maintained and administered by an independent party that is separate from the affected entities, (3) be based upon a data collection and measurement process that results in statistical profiles that are contemporaneous with the loads that are being estimated, (4) be continuously monitored and maintained and (5) be funded in a manner consistent with ACC and Federal Energy Regulatory Commission (FERC) rules.

THE LOCAL DISTRIBUTION COOPERATIVE (LDC) INTERIM SOLUTION

The short time frame existing until January 1, 1999 necessitates using an interim methodology to address load profiling. Between January 1, 1999 and the expected full-scale implementation of Arizona open access on January 1, 2001, only a limited number of residential customers will be eligible to choose their electric supplier. This is shown in Table 1. Based upon the most complete data available (1997 year-end information) and the one-half of one percent per quarter implementation plan proposed in the ACC rules, a minimum of 424 residential customers will be eligible for direct access in the five AEPCO Arizona Class A Member Cooperative service areas. This number will increase by a similar amount each quarter. The LDCs shown in Table 1 include Duncan Valley Electric Cooperative (Duncan), Graham County Electric Cooperative (Graham), Mohave Electric Cooperative (Mohave), Sulphur Springs Valley Electric Cooperative (Sulphur) and Trico Electric Cooperative (Trico).

Table 1: Minimum Number of Residential Customers Eligible for Direct Access

AZ LDC	YEAR END 1997	01/99	04/99	07/99	10/99	01/00	04/00	07/00	10/00
Duncan	1,909	10	19	29	38	48	57	67	76
Graham	5,687	28	57	85	114	142	171	199	227
Mohave	24,868	124	249	373	497	622	746	870	995
Sulphur	32,828	164	328	492	657	821	985	1,149	1,313
Trico	19,513	98	195	293	390	488	585	683	781
Totals	84,805	424	848	1,272	1,696	2,120	2,544	2,968	3,392

Each LDC proposes to employ static load profiling as an interim measure, pending ACC approval of a dynamic statewide load profiling system and its subsequent development and implementation. It is well recognized that a drawback with static load profiles is that the

information may not capture the weather and operating conditions that are unique to a settlement period. However, the net energy imbalances that may result from this less-accurate method represents only a small number of residential customers and are expected to be relatively minor.

The USWGLPS recommended that during the interim 1999 – 2001 period, Arizona's Affected Utilities should be able to apply any reasonable method for profiling small loads within their service areas. This could include static, dynamic or hybrid approaches that would provide a reasonably accurate representation of residential customer load patterns.

The USWGLPS also specified that the interim period offered an opportunity to develop, test, validate and improve upon a proposed statewide dynamic load profiling system, prior to its implementation on a wide scale basis. The statewide dynamic load profiling system that is recommended to be designed would address issues that arose in the restructured Arizona marketplace prior to 2001, concerned with possibly variations in energy prices, residential customer penetrations and energy imbalance costs due to the use of load profiling. A methodology could be developed during this period for applying load profiles in all subsequent applications (small commercial, agricultural and other less than 20 kW electric customers) as well as special uses such as street and highway lighting (which could also utilize *deemed* load profiles, using engineering estimates to create daily load shapes.).

The LDCs will utilize and evaluate static load profiling during the interim period to determine how it could be refined to be more accurate. This will be accomplished through efforts of their representatives on the Direct Access Working Group Load Profiling Subcommittee (DAWGLPS), consisting of AEPCO Class A Member LDCs, AEPCO and allied LDCs. Some of these representatives will also participate in the statewide USWGLPS.

DESIGN OF STATIC LOAD PROFILES

Load profiles will be designed so that ESPs can use the data to improve the accuracy of the day-ahead forecasts. They will be based upon statistical representations of actual loads. Validation of the appropriateness of a customer's load profile will be available from billing information.

The LDCs propose to create a day type load shape library by January 1, 1999 which will be incorporated with a daily energy model, developed during 1999, to further increase load profile accuracy. This daily model methodology strikes a balance between the proxy-day approach, used in New England, where hourly loads for a customer class are assigned values based upon data from a historical load research database, and the hourly model approach, where hourly profile models are based upon a set of equations that specify load as a function of weather conditions, system parameters and calendar variables.

The day type shape library to be developed at each LDC will contain load profiles for specific day types within each month. The day types created prior to January 1, 1999 would include weekend/holidays and weekdays for each month. During 1999, additional day types will be evaluated for potential incorporation into the load shape library. Potential day types to be evaluated may include hot weekdays, mild weekdays and colder weekdays for each monthly period.

After the residential day type load profiles are developed, the DAWGLPS will evaluate additional opportunities to increase their accuracy during 1999. Emphasis will be placed upon developing daily energy models that can provide daily consumption as a function of weather and day type. This will include employing weather sensitive regression adjustments to the static day type load profiles. Other approaches that could be employed s to make them more accurate include matching and adjusting the load profiles to the overall control system load shape; producing time period specific profiles prior to final settlements and/or using econometric techniques to reflect changes in weather and other variables. Emphasis will be upon adjustments that can be made to the static load profiles. The insight gained in these analyses will be of value

in determining techniques that may increase load profiling accuracy in both, static and future dynamic applications.

The load shapes will consist of hourly kW loads for each applicable load profiling category, or equivalent normalized values. Static load profiling methods will be used to develop the day type load shapes, based upon data that is currently available or can be readily developed. These static load profiles will be created by a combination of averaged historical data from the LDC's 1992-1994 load research sample, data obtained from the Electric Power Research Institute (EPRI), the National Rural Electric Cooperative Association's (NRECA) Cooperative Research Network (CRN) and data shared by Arizona Investment Owned Utilities that have (or had in the past) extensive load research programs covering climatic areas similar to the LDC service areas. Load shapes will be created that approximate customer usage in a given segment for a given day. The final set of load shapes for each LDC segment will be differentiated by month and day type

LDC STATIC LOAD PROFILING SEGMENTS

In the context of load profiling, segmentation is the degree to which customers are divided into categories of similar customer types. Residential customers could be divided into numerous homogeneous groups. Typical segments may include *electric rate schedules, energy usage, appliance mix, dual-energy vs. all-electric and dwelling type (or size).* Stratification could also be used within each segment (e.g., customer energy usage within a specific rate schedule). Any segmentation method must trade off *accuracy* improvements against *additional administrative, development and implementation costs.* For example, if *residential load shapes are similar* (across electricity usage levels) in LDC service areas, perhaps **detailed segmentation may not be cost-justified.**

Simple segmentation schemes, such as one load profile applied to all residential customers in a specific rate category, facilitates implementation of direct access in the LDC service areas during 1999, although it can result in less accuracy in the assignment of energy costs. On the other hand, a high degree of segmentation could extremely complicate and possibly delay the

implementation of direct access in LDC service areas, due to the amount of analysis that would have to be performed within a short time span; however, it is recognized that such segmentation could result in greater accuracy in the assignment of energy costs.

The LDCs recommend that, initially, the static load profile categories should correspond to existing residential rate categories within a climatic zone (the LDC's service area), with no additional segmentation. This is necessary to implement direct access with load profiling by January 1, 1999. This is shown in Table 2 which indicates the three load profile segment classes and representative elevations and cooling degree days (CDD) in each segment.

Any additional segmentation is planned to be deferred until later. Issues that arise with additional segmentation include the costs and benefits which cannot be quantified without adequate market price data, the accuracy requirements for load profiles which have not been established, answers to the question of who pays for any additional segmentation which has not been addressed and specification of the segmentation criteria that may ultimately be deemed necessary (i.e., which should differ between residential and small commercial customers).

TABLE 2

MAXIMUM NUMBER OF RESIDENTIAL CUSTOMERS REPRESENTED BY LOAD PROFILES IN EACH SEGMENT

LDC	RESIDENTIAL CUSTOMERS	SEGMENT CLASS	ELEVATION (FT) AND CDD
Duncan	1,909	1	3,660/1,856
Graham	5,687	1	2,950/2,087
Mohave	24,868	2	540/5,024
Sulphur	32,828	1	4590/1,919
Trico	19,513	3	2,500/3,342
Totals	84,805		

The LDCs will create, update and make available to applicable market participants a data base of day type load shapes for each load profiling customer segment, to be used for settlements.

LDC LOAD PROFILE RESPONSIBILITY

A single entity will be responsible for managing the load profiles in each LDC's service area, subject to ACC oversight.